Antigo, Wisconsin, 2011 Field Day; Potato and Vegetable Insect Research

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I. Best Management Practices for the Control of Potato Virus Y (PVY) Spread – Antigo Research Station, 2011.

	Best Mgmt Practices (Foliar protectant, concentration start date, application frequency)	Plot Number	Flag Color
1)	Untreated Control	(101, 201, 301, 401)	red
2)	Aphoil, 4%, 6 July, 1X weekly	(102, 202, 302, 402)	white
3)	Stylet Oil, 0.75%, 6 July, 1X weekly	(103, 203, 303, 403)	blue
4)	Aphoil, 2%, 6 July, 2X weekly	(104, 204, 304, 404)	yellow
5)	Stylet Oil, 0.75%, 6 July, 2X weekly	(105, 205, 305, 405)	orange
6)	Requiem 25EC, 1.7 fl oz/A, 6 July, 1X weekly	(106, 206, 306, 406)	pink
7)	Aphoil, 2%, 6 July, 1X weekly DPX-HGW86 10OD, 10.1 fl oz/A, 22 July, (3 applications – 7 day interval)	(107, 207, 307, 407)	green
8)	Aphoil, 2%, 6 July, 1X weekly DPX-HGW86 10OD, 13.5 fl oz/A, 22 July, (3 applications – 7 day interval)	(108, 208, 308, 408)	brown
9)	Aphoil, 2%, 6 July, 1X weekly Sulfoxaflor 50WG, 0.714 oz/A, 22 July, (3 applications – 7 day interval)	(109, 209, 309, 409)	silver
10)	Aphoil, 2%, 6 July, 1X weekly Valent Experimental 20WG, 4.28 oz/A, 22 July, 1X weekly (3 applications – 7 day interval)	(110, 210, 310, 410)	lime
11)	Aphoil, 2%, 6 July, 1X weekly Beleaf, 2.8 oz/A, 22 July, 1X weekly (3 applications – 7 day interval)	(111, 211, 311, 411)	violet
12)	Aphoil, 2%, 6 July, 1X weekly Fulfill, 3.67 fl oz/A, 22 July, 1X weekly (3 applications – 7 day interval)	(112, 212, 312, 412)	2 red

II. PVY Impact on Yield and Quality / Initial Inoculum Levels and Current Season Spread, Arlington Agric. Exp. Station, 2011.

Treatment Number (Cultivar)	Initial Inoculum Level	Plot Number	Flag Color
1) Russet	Untreated Control	(101, 201, 301, 401)	red
2) Norkotah	0.8% (1/120)	(102, 202, 302, 402)	white
3)	5% (6/120)	(103, 203, 303, 403)	blue
4)	10% (12/120)	(104, 204, 304, 404)	yellow
5) Snowden	Untreated Control	(105, 205, 305, 405)	orange
6)	0.8% (1/120)	(106, 206, 306, 406)	pink
7)	5% (6/120)	(107, 207, 307, 407)	green
8)	10% (12/120)	(108, 208, 308, 408)	brown
9) Dark Red Norland	Untreated Control	(109, 209, 309, 409)	orange
10)	0.8% (1/120)	(110, 210, 310, 410)	pink
11)	5% (6/120)	(111, 211, 311, 411)	green
12)	10% (12/120)	(112, 212, 312, 412)	brown

III. PVY National Minituber Screening Trial – PVY^{O}, $PVY^{N:O}$, & PVY^{NTN}

Treatment (Cultivar)

1) CO98368 - 2RU	5) MSR061-1	9) Peter Wilcox	13) Trailblazer
2) AF3001 - 6	6) MSM182 - 1	10) ORO00022 – 7	14) A97066 - 42LB
3) NY121	7) AC99375 - 4RU	11) A98345 – 1	15) Yukon Gold
4) AF3362 - 1	8) Harley Blackwell	12) Dakota Diamond	16) Russet Burbank

IV. Colorado Potato Beetle; Neonicotinoid Statewide Insensitivity Among 7 Populations (Fig. 1) [1].

2011 Wisconsin Resistance Screen

County	Population	n	Slope ± SEM	LD_{50} (95% CL)		$\chi 2$	df	RR
Adams	A	524	1.90 (± 0.26)	0.62	(0.407 - 0.937)	17.47	5	22
	B	524	1.81 (± 0.25)	0.39	(0.267 - 0.577)	15.78	5	14
Langlade	A	295	1.77 (± 0.26)	0.33	(0.241 - 0.772)	11.38	3	11
Portage	A	525	1.49 (± 0.28)	0.72	(0.394 - 1.468)	25.94	5	26
	B	327	2.75 (± 0.51)	0.38	(0.239 - 0.878)	10.94	3	13
Waushara	A	500	2.03 (± 0.26)	0.73	(0.513 - 1.047)	14.15	4	26
	B	525	1.47 (± 0.11)	0.48	(0.395 - 0.588)	6.20	5	17
	C	425	1.63 (± 0.14)	0.72	(0.587 - 0.873)	5.63	4	25
Columbia	A.A.E.S	600	3.13 (± 0.33)	0.03	(0.028 - 0.034)	14.11	6	-

[1] Special thanks to all cooperating growers and pest management practitioners for their assistance with the CPB insensitivity project
[2] Resistance ratio estimates calculated against a Arlington Agricultural Experiment Station reference control strain of Colorado potato beetle adults (LD_{50} = 0.03).

V. Full Season – Reduced-Risk, Colorado Potato Beetle Control, Large Plot Demonstration Trials (Hancock Agricultural Experiment Station, Field K17)

	Treatments	Active Ingredient	Application Rates	Application Number	Plot Numbers
1)	Platinum® 75SC	thiamethoxam	2.67 fl oz / A	1 (28 April)	(101, 201, 301)
	Radiant SC	spinetoram	8.0 fl oz / A	1 (20 June)	
	Voliam Xpress™ 1.25SC	chlorantraniliprole	9.0 & 7.5 fl oz / A	2 (3, 17 Aug)	
2)	AdmirePro® 550SC	imidacloprid	8.7 fl oz / A	1 (28 April)	(102, 202, 302)
	Radiant SC	spinetoram	8.0 fl oz / A	1 (20 June)	
	Agri-Mek® 0.15EC	abamectin	14 & 12 fl oz / A	2 (3, 17 Aug)	
3)	Coragen® 1.67SC	rynaxypyr	7.0 fl oz / A	1 (28 April, 20 June)	(103, 203, 303)
	Radiant® SC	spinetoram	8.0 & 6.0 fl oz / A	2 (20 June, 6 July)	
	Admire Pro® 550SC	imidacloprid	1.3 & 1.3 fl oz / A	2 (3, 17 Aug)	
4)	Belay® 2.13SC	clothianadin	12.0 fl oz / A	1 (28 April)	(104, 204, 304)
	Valent EXP	experimental	4.0 fl oz / A	2 (3, 17 Aug)	
5)	HGW86 20SC	cyantraniliprole	13.5 fl oz / A	1 (28 April)	(105, 205, 305)
	Assail	acetamiprid	4.0 & 4.0 fl oz / A	2 (3, 17 Aug)	
6)	Syngenta EXP	experimental	10 oz / A	1 (28 April)	(106, 206, 306)
	Agri-Mek™ 0.7SC	abamectin	3.5 & 2.75 fl oz / A	2 (3, 17 Aug)	
7)	Rimon ® 0.83EC	novaluron	12.0 & 10.0 fl oz / A	1 (20 June, 6 July)	(107, 207, 307)
	Actara® 25WDG	thiamethoxam	3.0 oz & 2.0 fl oz. / A	2 (3, 17 Aug)	
8)	Coragen® 1.67SC	rynaxypyr	5.0 & 3.5 fl oz / A	1 (20 June, 6 July)	(108, 208, 308)
	Assail® 30SG	acetamiprid	4.0 & 4.0 oz / A	2 (3, 17 Aug)	
9)	Agri-Flex® 1.55SC	abamectin + thiamethoxam	8.5 & 5.5 fl oz / A	1 (20 June, 6 July)	(109, 209, 309)
	Coragen® 1.67SC	rynaxypyr	5.0 & 3.5 fl oz / A	2 (3, 17 Aug)	
10)	Brigadier® 2EC	imidacloprid + bifenthrin	6.14 & 5.0 fl oz / A	1 (20 June, 6 July)	(110, 210, 310)
	HGW 86 10OD	cyantraniliprole	10.1 & 6.76 fl oz / A	2 (3, 17 Aug)	
11)	Radiant® SC	spinetoram	8.0 & 6.0 fl oz / A	1 (20 June, 6 July)	(111, 211, 311)
	Voliam Xpress™ 1.25SC	chlorantraniliprole	9.0 & 7.5 fl oz / A	2 (3, 17 Aug)	
12)	Athena® 0.87EC	bifenthrin + avermectin	17.0 & 14.0 fl oz / A	1 (20 June, 6 July)	(112, 212, 312)
	Admire Pro® 550SC	imidacloprid	1.3 & 1.3 fl oz / A	2 (3, 17 Aug)	
13)	Actara® 25WDG	thiamethoxam	3.0 & 1.5 oz / A	1 (20 June, 6 July)	(113, 213. 313)
	Voliam Xpress™ 1.25SC	chlorantraniliprole	7.0 & 5.0 fl oz / A	2 (3, 17 Aug)	
14)	Agri-Mek™ 0.7SC	abamectin	3.5 & 2.75 fl oz / A	1 (20 June, 6 July)	(114, 214, 314)
	Coragen® 40WG	rynaxypyr	5.0 & 5.0 oz / A	2 (3, 17 Aug)	
15)	Valent EXP	experimental	4.3 & 4.0 fl oz / A	1 (20 June, 6 July)	(115, 215, 315)
	Belay® 0.15EC	clothianadin	14.0 & 10.0 fl oz / A	2 (3, 17 Aug)	